

II. REMARKS

A. Introductory Remarks

Reconsideration and allowance of this application is earnestly requested. Claims 1-3 and 5-9 are currently pending. Claims 1 and 5 are amended by this Amendment, and claim 4 has been canceled. New claims 8 and 9 have been added.

B. Rejection of Claims 1-3 Under 35 U.S.C. §102(e)

The Office Action dated July 05, 2006 rejected claims 1-3 as allegedly anticipated under 35 U.S.C. §102 (e) by U.S. Pub. No. 2001/0018270 ("Tsuchiya"). In light of the amendment made to independent claim 1, Applicants traverse this rejection.

Regarding independent claim 1, the Office Action states that Tsuchiya discloses a composition for chemical mechanical planarization (paragraph 0002) consisting of an aqueous solution of ozone (paragraph 0039) and abrasive particles (paragraph 0030). See Office Action, at page 2. Applicants have amended claim 1 to incorporate the limitations of claim 4. Accordingly, claim 1 now additionally recites that the concentration of ozone is less than that at which ozone interactions occur. The specification on page 7 paragraph [0024] discloses that there is typically a critical upper concentration of ozone above which undesirable reactions and interactions between dissolved ozone occur. Thus, claim 1 as amended defines the upper limit of the concentration of dissolved ozone in the composition.

In contrast, and as acknowledged by the Examiner, Tsuchiya fails to teach or suggest any concentration of ozone in the composition, nor does Tsuchiya teach or suggest specifically using a concentration of ozone less than that at which ozone interactions occur. Accordingly, Tsuchiya fails to teach or suggest each and every element of independent claim 1 and corresponding dependent claims 2 and 3.

Claim 4 was rejected as being obvious under 35 U.S.C. §103 (a) over Tsuchiya in view of U.S. Patent No. 6,124,210 ("Chino"). As the limitations of claim 4 have been incorporated into claim 1, accordingly, Applicants will address this rejection. The Examiner

asserts that Chino discloses the concentration of ozone at which ozone interactions occur and that it would have been obvious to select an ozone concentration in the cleaning process of Tsuchiya because Chino teaches that in the ozone treatment process, the number of the circular defects is reduced as the progress of the process time at a given ozone concentration. See, Office Action on page 4.

Chino teaches that the “Occurrence of Circular Defect” of the silicon containing film is a function of the duration of the “O₃ process” at a fixed gaseous ozone concentration of 100 g/Nm³. See, Chino col. 7, table 3. Chino does not teach or suggest the concentration at which ozone interactions occur in the aqueous dissolved phase. Moreover, Chino does not even teach or suggest the dependence of ozone concentration on the ozone interactions in the gaseous phase. Thus, there is simply nothing in Chino to suggest using a concentration of ozone in an aqueous solution that is less than that at which ozone interactions occur, as recited in independent claim 1. Accordingly, the combination of Tsuchiya and Chino also fails to teach or suggest aqueous ozone concentrations. Importantly, the combination of Tsuchiya and Chino fails to teach or suggest the aqueous ozone concentration at which ozone interactions occur as recited in claim 1. Therefore, Applicants request withdrawal of this rejection as to claims 1-3.

C. The Rejection of Claims 4-5 Under 35 U.S.C. §103 (a)

Claims 4 and 5 have been rejected as obvious under 35 U.S.C. §103 (a) over by U.S. Pub. No. 2001/0018270 (“Tsuchiya”) in view of U.S. Patent No. 6,124,210 (“Chino”). Claim 4 has been canceled; therefore, the rejection of this claim is now moot. Regarding claim 5, Applicants traverse this rejection.

Claim 5 recites in part “wherein the concentration of ozone is less than about 20 parts per million.” As discussed above, Tsuchiya fails to disclose the concentration of ozone in the composition. Moreover, Chino does not teach or suggest the dependence of ozone concentration on the ozone interactions in the *gaseous* phase, nor does Chino teach or suggest the *aqueous* concentration at which ozone interactions occur. Even more specifically, Chino does not teach or suggest a concentration of ozone less than about 20 parts per million as recited in claim 5.

Therefore, the combination of Tsuchiya and Chino fail to teach or suggest all of the limitations of claim 5, and Applicants request withdrawal of this rejection.

D. The Rejection of Claims 6-7 Under 35 U.S.C. §103 (a)

Claims 6-7 have been rejected as obvious under 35 U.S.C. §103 (a) over Tsuchiya in view of U.S. Patent No. 6,429,133 ("Chopra"). Applicants traverse this rejection.

Claims 6 and 7 depend from independent claim 1. As discussed above, Tsuchiya fails to teach or suggest each and every limitation of claim 1. Similarly, Chopra fails to teach or suggest, alone or in combination with Tsuchiya, a concentration of ozone in an aqueous solution that is less than that at which ozone interactions occur. Therefore, neither Tsuchiya nor Chopra teach or suggest, alone or in combination, all of the elements of independent claim 1. Accordingly, on this basis alone, Applicants request withdrawal of this rejection as to dependent claims 6 and 7.

In addition, neither Tsuchiya nor Chopra teach or suggest the presence of ammonium salts. Chopra discloses a composition for planarization of aluminum surfaces using a fixed abrasives and a polishing solution comprising a surfactant, a complexant, and an oxidant. See Chopra col. 2 lines 50-55. Chopra does not teach or suggest the use of an ammonium salt in combination with an aqueous solution of ozone as an oxidizer and abrasive particles in a slurry composition. Therefore, neither Tsuchiya nor Chopra, alone or in combination, teach or suggest all the limitations of claims 6 or 7. Accordingly, Applicants respectfully request withdrawal of the rejection of dependent claims 6 and 7.

E. New Claims 8 and 9

Claims 8 and 9 have been added by this Amendment. None of the references cited above, alone or in combination, teach or suggest the limitations of these claims. Therefore, Applicants believe that these claims are in condition for allowance.

III. Request for Allowance

In view of the arguments presented above, all pending claims are now thought to be in condition for allowance, an indication of which is solicited. In the event that any issues remain outstanding, Applicants would appreciate the courtesy of a telephone call to the undersigned counsel to resolve such issues in an expeditious manner so as to place this application in condition for allowance.

No additional fees are believed due, other than the separately filed one-month extension fee. However, if any additional fees are determined to be due, the Commissioner is hereby authorized to charge these fees to the Morgan, Lewis & Bockius deposit account no. 50-0310.

Respectfully submitted,

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July 23, 2007 (filed Monday after Sunday due date)

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